By email: emissions.trading@beis.gov.uk

Uniper UK Limited
Compton House
2300 The Crescent
Birmingham Business Park
Birmingham B37 7YE
www.uniper.energy

Uniper UK

Registered in
England and Wales
Company No 2796628

Registered Office:
Compton House
2300 The Crescent
Birmingham Business Park
Birmingham B37 7YE

Response to: Developing the UK Emissions Trading Scheme (UK ETS)

16 June, 2022

Uniper is a leading international energy company, has around 11,500 employees, and operates in more than 40 countries. The company plans for its power generation business in Europe to be carbon-neutral by 2035. Uniper's roughly 33GW of installed generation capacity make it one of the world's largest electricity producers. The company's core activities include power generation in Europe and Russia as well as global energy trading and a broad gas portfolio, which makes Uniper one of Europe's leading gas companies. In addition, Uniper is a reliable partner for communities, municipal utilities, and industrial enterprises for planning and implementing innovative, lower-carbon solutions on their decarbonization journey. Uniper is a hydrogen pioneer, is active worldwide along the entire hydrogen value chain, and is conducting projects to make hydrogen a mainstay of the energy supply.

The company is based in Düsseldorf and is one of Germany's largest publicly listed energy supply companies. Together with its main shareholder Fortum, Uniper is also Europe's third-largest producer of zero-carbon energy.

In the UK, Uniper operates a flexible generation portfolio of seven power stations capable of powering around six million homes, and a fast-cycle gas storage facility.

Consultation Response

We have set out below our answers to the questions in the consultation that are relevant to us. Our views in summary:

- Low liquidity is an ongoing problem in the UK ETS. We support measures to improve liquidity in the UK market, of which the most effective would be significantly increasing the size of the market by linking with the EU ETS.
- We support a net zero consistent UK ETS and agree that a portion of unallocated allowances and/or flexible share should be auctioned to smooth the transition to the net zero cap. We support the proposed reset of the industry cap: it is critical that auctioning remains the primary means of distributing allowances.

- We agree that where the risks of carbon leakage or competitiveness impacts are low, free allocation should be withdrawn or phased out. We support the extension of the UK ETS to waste incineration and EfW, subject to consistent treatment for other waste management facilities. The waste sector needs to be considered and treated holistically to avoid unintended consequences, such as displaced waste streams and increased environmental pollution and emissions.
- Removing the 20MWth and 3MW aggregation limits is critical to avoid market distortions. Projects that participate in the GB Capacity Market or enter into contracts with network operators for the provision of network services should account for their CO2 emissions though the UK ETS process even if using the small or ultra-small emitters scheme.

Consultation questions:

Net zero consistent cap

1) Do you agree with the Authority's proposed range for the net zero consistent cap? (Y/N) Please explain your answer.

Yes. Reducing the cap is necessary to drive decarbonisation efforts and demand for low carbon fuels to deliver the reductions needed to get us to net zero.

2) What do you expect the effect of the cap set at the bottom of the range (i.e. total of around 887 million allowances over the entire phase) to be on your plans for emissions reductions over the 2020s?

As set out above, Uniper is committed to making our power generation business in Europe climate neutral by 2035, and to becoming carbon neutral group wide by 2050. As well as decarbonising our existing assets, we have set ourselves the target of operating worldwide along the entire value chain of hydrogen. A lower UK ETS cap would help drive demand for low carbon hydrogen: finding off-takers is currently a significant challenge for us in project development. Where the cap is set within the proposed range will not, in itself, shape our plans for emissions reductions from our power generation fleet over the 2020s. More important for us to understand is how many allowances will be issued, when. Providing this certainty enables investment decisions.

3) What do you expect the effect of the cap set at the top of the range (i.e. total of around 936 million allowances over the entire phase) to be on your plans for emissions reductions over the 2020s?

A higher UK ETS cap will be a weaker driver for the development of viable UK markets for low carbon energy and fuels.

Free allocation review

4) Do you agree with the Authority's minded to position to reset the industry cap, as presented above? (Y/N) Please explain your answer.

Yes. If the overall cap reduces but the industry cap is not reset, there will be a significant detrimental impact on the liquidity and functioning of the traded market in the

UK. It could also lead to very different carbon costs in the UK and the EU, which would impact the functioning of cross border and international markets.

5) Do you agree with the rationale put forward to support decisions the Authority will make in the future if resetting the industry cap? (Y/N) Please explain your answer, and set out if there are any other aspects you think we should take into consideration.

Yes. In particular we agree that it is critical that auctioning remains the primary means of distributing allowances.

7) Do you agree with the principles set out above, by which we will propose future changes to free allocation policy? (Y/N) Please explain your answer or whether there are any others you would like us to consider.

Yes. Ensuring that the UK ETS supports UK climate goals, drives decarbonisation and takes into account the availability of low carbon technologies and fuels seems a good basis for assessing the need for, timing of, and extent of future changes.

Additional principles that government might consider, are:

- Consistency with other major ETS schemes, in particular the EU ETS, with a view to future linking;
- Predictability, with clear signalling and timeframes for changes.

8) Do you agree with the proposal to not use a cross-sectoral correction factor to reduce free allocations proportionally for sectors, but to find alternative means of better targeting those allowances? (Y/N) Please explain your answer.

Yes. When considering the allocation of free allowances, the potential for carbon leakage, the availability of low carbon alternatives and the potential for unintended consequences and/or perverse incentives should be taken into account. These will differ from sector to sector and will change for different sectors at different times. Rather than simply tightening the cap for all industry sectors, government should take a carefully managed approach to lifting specific sectors into the traded market.

9) Are there specific elements of free allocation design with regards to eligibility, calculations, or other rules where you would like to see changes made, if you have not already flagged these via your call for evidence response? (Y/N) Please explain your answer and how they would align with the principles we have proposed.

Yes. At present, grey hydrogen producers are not exposed to the carbon price. This will create distortions in the hydrogen market when blue hydrogen production begins, unless blue hydrogen is also given free allocation. We believe all hydrogen production should be brought into the traded market.

Free allocation technical changes: amending the electricity generator definition to only consider electricity exports in the baseline period

22) Do you agree with this proposed amendment? (Y/N) Please explain your answer.

On balance, we think this fair. The updated baseline period is more relevant than going back to 2005 (though we note that under the new baseline period operators will still be classified based on their exports 3-11 years ago), and a wide baseline period helps avoid gaming.

23) Should minimal or one-off electricity exports be excluded from the electricity generator classification? (Y/N) Please explain your answer.

Yes. Consideration needs to be given to the definition of “minimal” or “one-off”. The generation licence de minimis exemption levels are not appropriate here, as they are quite large. Instead, operators need to demonstrate that the export concerned was an outlier and didn’t represent the norm at all. A better measure might be something like exporting for less than 2% of periods in a year or less than 2% of installed capacity of the generating plant.

Free allocation technical changes: Combined Heat and Power (CHP) plants and electricity generator definition

24) Should the current rules be maintained? (Y/N) Please explain your answer. If you answered ‘Yes’ please set out what the benefits of doing so are in your view.

Yes. As the electricity grid decarbonises, CHP will become an increasingly bigger proportion of high-carbon grid electricity, and operators should not be incentivised to invest in CHP or oversize CHP plant on the basis of being able to compete, even if only for a small amount of their output, in the electricity market. Exempting CHP plant from the requirement to purchase UK ETS allowances to cover their emissions would create perverse incentives and market distortions and slow the decarbonisation of the electricity system.

25) Should an amendment to the electricity generator classification be made to exclude installations that produced electricity for sale to third parties, if that electricity was produced by means of a CHPQA-certified plant, operating as part of an operator’s industrial activity? (Y/N) Please explain your answer.

No, as above.

26) Should a cap be set on the maximum amount of electricity that can be exported as a condition to this exclusion? (Y/N) Please explain your answer.

There should not be an exclusion. If there is then yes, a cap should be set, and it should be for a small proportion of output, to avoid incentivising high carbon generation for the electricity grid.

27) Do you believe that the Option 2 proposal will support investments in long-term decarbonisation solutions? (Y/N) Please explain your answer.

No. It will incentivise investment in CHP instead of lower carbon long term solutions.

28) How can operators provide robust evidence that their CHPQA certified CHP plant operates as part of their industrial process, and does not operate independently for the sole purpose of generating electricity for sale?

This is not the right question. Operators that rely on generating electricity for sale should be held to the same conditions and restrictions as all other electricity generators.

Unallocated free allowances and flexible share

29) Do you agree that, should the industry cap be reset to a level that would fall below free allocation in 2024 and 2025, a portion of unallocated allowances and/or flexible share should be used, as currently legislated, to mitigate against

the application of a cross-sectoral correction factor? (Y/N) Please explain your answer.

No, unallocated allowances should be used primarily to smooth the transition to the net zero cap by being auctioned to increase market liquidity or retained for market stability purposes. As explained in our response to question 4 and 8, if the overall cap reduces but the industry cap is not adjusted, there will be a significant detrimental impact on the liquidity and functioning of the traded market in the UK.

Different industrial sectors will be more or less prepared to be exposed to the traded market. The government should take a carefully managed approach when reducing free allocations, rather than simply tightening the cap for all industry sectors.

30) Do you agree that a portion of unallocated allowances and/or flexible share should be auctioned to smooth the transition to the net zero cap? (Y/N) Please explain your answer.

Yes, this would help support market liquidity. This will be important, as the scale of the reduction envisaged is significant.

31) Do you agree we should consider auctioning a portion of unallocated allowances and/or flexible share before 2024 to support market liquidity? (Y/N) Please explain your answer.

Yes; market liquidity definitely needs to improve. It should be noted that the best way to improve market liquidity would be to significantly increase the size of the market, by linking with the EU ETS.

32) Do you agree that a portion of unallocated allowances and/or flexible share should be retained for market stability purposes? (Y/N) Please explain your answer.

Yes; carrying forward unallocated allowances can be a buffer to protect against market shocks. Likewise, where shocks are significant and the market is threatened, government should also be able to borrow from future years, if this is based on sound and predictable criteria.

A call for evidence on future markets policy

33) Are there features of ETS markets that put them at greater risk of market abuse than other financial markets? (Y/N) If so, what features and why?

There are two factors that support market abuse: these are number and size of counterparties and market liquidity. The UK ETS is not at risk from a few large counterparties but it does suffer from low liquidity due to its small overall size. This should be countered by linking the UK and EU ETSs.

34) Are there other drivers of evolving market conditions that future UK ETS markets policy should take into account? (Y/N) If so, what are they? What evidence do you have to support your view?

Yes. Other key drivers include the cost and availability of low carbon technology, including CCUS, and fuel alternatives.

In addition, if the UK ETS diverges significantly from the EU ETS it may lead to competitive distortions and disadvantages for British businesses. Linking the two ETSs

would be the most effective way to manage this, but in the meantime maintaining an open dialogue with European officials to align market design is critical.

35) What impacts do you envisage that these drivers could have in the UK ETS in the coming years, particularly in relation to market stability and integrity? What evidence do you have to support your view?

Ensuring that the availability and cost of low carbon technology and fuel alternatives is taken into consideration when adjusting the UK ETS cap will help avoid market shocks.

36) Do you agree that these are the right objectives for markets policy as the UK ETS matures? (Y/N) Please explain your answer.

Yes. Long term reassurance is particularly important to enable investment, as is the ability to counter excessive and destabilising market shocks.

37) On what timescale should we look to withdraw the ARP: as soon as possible; as part of the introduction of a potential wider markets policies package; alongside the introduction of the net zero consistent cap; or another timescale? If another timescale, what timescale? Why that timescale?

The ARP should be withdrawn as soon as possible. It creates uncertainty as it is a price arbitrarily determined by government that can be changed at short notice, if the political decision is made to do so.

38) Should the ARP be replaced by another mechanism? (Y/N) If so, what type of mechanism should replace it and why?

The ARP should be replaced with a Market Stability Reserve (MSR) – or a Supply Adjustment Mechanism (SAM), as described in the 2019 consultation on the future of carbon pricing (we assume that an MSR or a SAM would work in the same way).

An MSR/SAM is a more flexible tool as it can protect against allowance prices falling below a certain level by restricting supply, whilst also creating a reserve of allowances that can be used to adjust the market when supply is too tight. In the current, tight, UK market, the MSR should be created from some of the unallocated allowances and/or borrowed from future allowances.

The UK should learn from the EU, which had to introduce an MSR to improve the functioning of the EU ETS. The UK should look to introduce an MSR or a SAM before it is needed, to ensure a smooth introduction and help deliver market stability.

39) Do the thresholds for triggering the CCM remain fit for purpose? (Y/N) If not, how should they be amended?

Yes. The CCM is working. The fact that it was triggered but no action was taken shows that it remains a flexible and effective tool.

40) Do the intervention options available to the Authority remain fit for purpose? (Y/N) If not, how should they be amended?

Yes.

41) Following the triggering of the CCM in December and January, are there elements of the CCM process or design that could be improved? (Y/N) If so, what are they and how can they be improved?

As above, the fact that the CCM was triggered but no action was taken shows that it is working.

42) Does the current auction process remain fit for purpose? (Y/N) If not, how should it be amended?

Yes.

43) Are there other measures that the Authority should consider to further support liquidity in the UK ETS? (Y/N) If so, what are they?

Yes, linking with the EU ETS would support liquidity and market stability. Releasing more allocations would also improve liquidity, but would not be as effective. Liquidity in the UK ETS is limited: because it is a small market it is easily squeezed.

Since the UK ETS, like all other carbon markets, is driven by politics, political interventions should be based on good fundamental research, be rules-based, and be infrequent in order to preserve the trust of participants.

44) Should the Authority consider stocking the market stability mechanism account with allowances? (Y/N) Please expand on your answer and if Y, provide views on how the account should be stocked.

Yes, if they are taken from the unallocated portion of the industry cap. This would not need to be significant: it is an insurance mechanism. Rules-based releases of those allowances to the traded market would also increase liquidity and reduce volatility.

Clear rules about government intervention in the market and front running (borrowing from future allowances) would provide greater certainty and liquidity.

45) Does the current banking and borrowing policy remain fit for purpose? (Y/N) If not, how should it be amended?

Yes, the current banking and borrowing policy for UK ETS market participants mirrors the EU ETS and is fit for purpose.

Aviation

48) Do you agree that if there are minimal risks of carbon leakage and competitiveness risks associated with carbon leakage from the UK ETS for the aviation sector, free allocation should be withdrawn or phased-out? (Y/N) Please expand on your answer and give evidence where possible.

Yes. If the risks are minimal, free allocation should be withdrawn or phased out to increase liquidity in the traded market (by growing it) and increase demand for low carbon technologies and fuels through a short term push on CO_2 prices.

Expanding UK ETS coverage within covered sectors (additional gases and activities)

We agree in principle that where the risks of carbon leakage or competitiveness impacts are low, free allocation should be withdrawn or phased out to increase liquidity in the traded market (by growing it) and increase demand for low carbon technologies and fuels.

87) What other traded sectors, if any, vent methane? What are the likely number of installations and size of emissions? Should these proposals be applied to these sectors? Please provide evidence to support your answer.

We vent small amounts of methane from our gas storage facility and our gas power operations. The emissions from these activities are minimal. For example, in 2021 we emitted around 1500tCO_2 from venting methane at our Grain plant, compared to around 2mtCO_2 from combustion. We report our vented emissions on an annual basis via the pollution inventory – other sectors may do the same.

These proposals should not be applied to our activities: we only vent where it is operationally necessary. There is a material difference between operational venting and the venting we do, which is emergency-only venting to protect safety critical equipment.

CCUS & Transportation

93) Do you agree with the Proposal that the UK ETS be expanded to allow for the transportation of CO2 through other forms of non-pipeline transport (i.e. shipping, rail and road)? (Y/N) Please explain your answer.

Yes. Non-pipeline transport of CO_2 may have a key role to play in decarbonising power and industrial plant that are not within clusters, or within easy reach of onshore and offshore pipeline infrastructure. Further, NPT of CO_2 can be more cost effective and flexible than pipeline transport. It is important that the UK ETS does not distort the future CO_2 transport market.

94) Do you have any evidence to suggest how expanding the UK ETS to include other forms of CO2 transport may impact the wider UK ETS or other policy areas of the Governments of the UK, either positively or adversely? For example considering the impacts of emissions produced by chosen means of transport. (Y/N) Please explain your answer.

Emissions from any NPT of CO_2 should be dealt with in the same way as the emissions from that transport sector are generally dealt with – e.g., it would seem odd for shippers of CO_2 to be paying ETS or CO_2 costs where others don't simply because of their cargo.

95) What mitigation strategies, if any, do you believe should be applied in relation to CO2 emissions associated with all forms of CO2 transport for CCUS (eg. emissions produced by a cargo ship or those associated with the operation of pipelines)? For example, a mitigation strategy might include the requirement for a chosen means of transport to adhere to emissions standards, net proportion of emissions delivered criteria (after deduction of emissions from transportation) or similar sustainability criteria.

Emissions associated with any form of CO_2 transport should, in principle, be treated in the same way as that transport sector or class of use is usually treated. For example, electrical compressors for pipeline transport will be consuming electricity produced by a source paying under the UK ETS (CCGT, coal), or will be zero carbon (RES, nuclear), or will be out of scope (EFW), so a new control wouldn't be necessary.

Biomass

96) Do you agree with the proposal that we implement sustainability criteria for solid, liquid and gaseous biomass for installations? (Y/N) Please explain your answer.

Yes. We should clearly avoid the use of unsustainable biomass, which has multiple negative impacts, such as loss of carbon sinks and biodiversity, rising food prices, and water and soil pollution.

97) Which sustainability criteria should the UK ETS apply to solid, liquid and gaseous biomass (RO, CfD etc.), and would there be any value in developing UK ETS specific criteria? Please explain your reasoning.

The UK should look to be consistent with the EU and the sustainability rules set out in Article 29 of Directive 2018/2001.

98) What are your views on the proposal that for installations and combustion units which only burn biomass to be exempt from the UK ETS, operators must only use sustainable biomass?

We agree. Unsustainable biomass has multiple negative impacts, such as loss of carbon sinks and biodiversity, rising food prices, and water and soil pollution.

We note that exempting biomass combustion from the UK ETS could have unintended consequences and create distortions in the waste sector if waste combustion is included. Government need to take a holistic approach to regulating biomass and waste combustion.

101) Going forward, is there anything else you think we should consider regarding biomass in the UK ETS?

Biomass energy generation from combustion competes in the same market as other forms of energy generation, including EfW. Many wastes contain a large proportion of biomass. This consultation includes proposals to extend the UK ETS to include EfW but exempt combustion of waste classed as biomass. This could lead to unintended consequences, such as waste biomass being sent to biomass combustion rather than to EfW with CCS, which could prevent maximum emissions savings overall. Waste disposal and biomass combustion need to be considered holistically, to avoid domestic emissions displacement.

20MWth threshold and 3MW aggregation threshold call for evidence

102) Do you have data on the number, scale and/or emissions level of installations that are currently not monitored under the UK ETS because of the two thresholds? (Y/N) If so, please provide this where possible.

No, we don't have a precise number of the number of sites currently not monitored under the UK ETS because of these thresholds. But we are aware of portfolios of small engines running into hundreds of MW, purely dedicated to the production of electricity, which may be exempted.

For example, the last T-4 Capacity Market auction results shows 116MW (electrical) of gas new-build projects, each with a site capacity below 10MW electrical, which could benefit from this exemption. Many more projects secured agreements in previous years, while more sites may be used for DSR CMUs. The Environment Agency has also been reviewing the role of small generators and their associated emissions, and will therefore also be a source of information about the scale of this issue.

103) Do you have data regarding the abatement costs of installations paying the carbon price and those not (i.e., exempt, USE, HSE)? (Y/N) If so, please provide this where possible.

No.

104) Do you have data regarding the compliance costs of installations and likely compliance costs of those outside of the UK ETS (i.e., exempt, USE, HSE)? (Y/N) If so, please provide this where possible.

No.

105) Do you have evidence of distortion in relevant markets caused by the 20MWth threshold (e.g., in the form of smaller installations coming on to the market at an increasing rate)? (Y/N) If so, please provide this where possible.

In part through the GB Capacity Market, there has been substantial growth in distribution connected sub 20MW generation (diesel and gas reciprocating engines). This generation capacity is being used in the energy and flexibility markets and provides capacity for the GB system. It should therefore be subject to the same costs of their carbon emissions as providers that are above 20MW. In this case the 20MW is an artificial threshold that is distorting these markets.

106) Do you have evidence of adverse interactions of the current threshold level with other UK Government or Devolved Administration policies (e.g., with Carbon Price Support)? (Y/N)

No.

107) Do you believe there is other evidence that should be taken into account when considering lowering the 20MWth threshold? (Y/N) If so, please provide this.

No.

108) Do you believe that there is a case for lowering the 20MWth threshold to bring more operators of combustion units under the scope of the UK ETS? (Y/N) If so, please state why?

Absolutely. Exempting generation plant up to 20MW from the ETS provides a competitive advantage to that category of plant in the energy, flexibility and capacity markets as they do not bear the cost of their carbon emissions. Projects that participate in the GB Capacity Market or enter into contracts with network operators for the provision of network services, should account for their CO2 emissions though the UK ETS process even if using the small or ultra-small emitters scheme. This is to ensure these exemptions do not result in distortion of competition in these markets.

109) Do you have evidence of distortion in relevant markets caused by the 3MWth threshold for calculating total thermal input? (Y/N) If so, please provide this where possible.

The 3MW aggregation threshold allows operators to add multiple small generators resulting in an overall thermal capacity which far exceeds the 20MWth threshold. These sites are then used to participate in the GB Capacity Market and other flexibility markets, distorting these markets.

110) Do you believe that there is a case for removing the 3MWth threshold to bring more operators of combustion units under the scope of the UK ETS? (Y/N) If so, please state why?

Yes. The current 3MW aggregation threshold incentivises operators to aggregate multiple small engines to avoid being caught by the 20MWth limit. This loophole results in lower thermal efficiency and higher emissions, undermining the main objective of the UK ETS.

The threshold should be removed to avoid this aggregation risk. If government is not minded to remove it then it should, at the very least, align with Environmental Permitting Regulations, which set the threshold at 1MW.

111) Do you believe the UK ETS is an appropriate policy to ensure the decarbonisation of small power generators in alignment with Net Zero? (Y/N) If yes, please say why. If no, what other policies do you think may be preferable?

Yes, where those generators are competing in the same market as larger generators.

Expanding the UK ETS to domestic maritime

We agree in principle that where the risks of carbon leakage or competitiveness impacts are low, free allocation should be withdrawn or phased out to increase liquidity in the traded market (by growing it) and increase demand for low carbon technologies and fuels.

Expanding the UK ETS to include waste incineration and energy from waste

124) Do you agree with the proposed timing for when waste incineration and EfW could be introduced into the UK ETS? (Y/N)

We agree that the UK ETS should be expanded to include EfW, subject to consistent treatment for other waste management facilities. Government needs to assess and address concerns over carbon leakage – for example, transfer of waste to facilities not proposed to be included in the UK ETS, either due to their size or technology.

We also need a clear approach with milestones, to reduce uncertainty and enable investment. Where the sector can see phased in ETS obligations with parallel increases in the landfill tax and investment in preventing illegal disposal, emissions minimising behaviour can be driven.

We are concerned that CCS will not be widely available by the 2025 date proposed and we urge the government to support mitigation technologies for waste management facilities.

126) Do you agree that the UK ETS should be expanded to include waste incineration and EfW? (Y/N) Please outline your reasoning, including alternative options for decarbonisation of the sector outside of the UK ETS.

We agree that the UK ETS should be expanded to include EfW, subject to consistent treatment for other waste management facilities.

We note that without consistent treatment across the waste sector, increasing the cost of EfW will divert wastes away from EfW and could increase emissions:

- Biogenic waste is more likely to be sent for anaerobic digestion with subsequent disposal to land, or disposed of directly to land, both of which have a negative climate impact and can increase local pollution.
- Fossil wastes could be diverted to landfill, resulting in the energy opportunity cost, or to exports, risking carbon leakage and environmental pollution overseas, or to illegal disposal, risking domestic environmental pollution

There are a wide range of options to help decarbonise the waste sector, of which two are particularly important: further restrictions on landfill (landfill bans have proved effective in Europe), and a comparative incentive to reward negative emissions.

Government needs to address the waste and biomass sectors holistically to avoid unintended consequences.

127) Do you agree that all types of waste incinerators should be included in the UK ETS? (Y/N) If you believe certain incineration activities should be exempt, e.g. incineration of hazardous or certain healthcare waste, please provide details and specify which waste stream.

Yes. We see a risk of wastes being transferred from facilities included in the ETS to those excluded, without benefit to the climate. To minimise this risk, the scope of the UK ETS should be as wide as possible within the waste sector.

128) Do you believe ATT should be included in the UK ETS? (Y/N) What challenges could arise as a result of including ATT, if any, that are different to conventional waste incineration plants?

Yes, as should ACT (advanced conversion technologies, such as gasification).

If suitably incentivised, ATT can deliver negative emissions through permanent or long term sequestration of biochar. Bringing ATT into the UK ETS ahead of biomass gasification could therefore lead to biomass being diverted to gasification without CCS, leading to overall higher emissions.

129) Do you agree that the point of MRV obligation for the UK ETS should be placed on the operators of waste incinerators and EfW plants? (Y/N) Please outline your reasoning in as much detail as possible and provide evidence to support your views.

Yes. However, determining the best method to collect the relevant information for reporting will require further consultation and may vary from plant to plant due to the heterogenous nature of wastes.

131) Do you believe that the Small and Ultra Small Emitter schemes that are currently available to eligible UK ETS participants should also be available to waste incinerators and EfW plants? (Y/N) Please provide details including, where relevant, whether your organisation is likely to be eligible for these schemes based on current rules.

We do not believe these schemes should be available to UK ETS participants that participate in the GB Capacity Market or enter into contracts with network operators for the provision of network services, as they have a distorting effect on those markets.

132) Which MRV proposal do you believe should be implemented to determine the UK ETS obligation for waste incinerators and EfW plants?

i. **If Option A (individual plant monitoring), please provide your views on which methods could be used, along with any information on the practicality of their implementation and likely costs.**
ii. **If Option B (emissions factor approach), please provide your views on how these emissions factors should be calculated, along with any information on the practicality of implementation and likely costs.**

In your answer, please outline how frequently fossil emissions should be monitored under both options and consider whether there are other suitable MRV options that we have not identified.

We prefer Option A. Methods should include individual operators analysing their waste inputs to determine likely fossil/biogenic carbon input materials and then supporting this analysis with occasional radiocarbon screening checks of inputted waste, and also by assessing the operating plant stoichiometric data. This is a more robust format than Option B.

It should be noted that the commercial availability of radiocarbon analysis services in the UK is currently quite restrictive and typically samples have to be sent to laboratories in the EU or US. This has implications for the timing and costs – MRV could add ~1% to overall EfW costs. It will take time for UK testing infrastructure to develop and costs to fall.

Option B could potentially be more applicable for plants that use a relatively consistent waste source.

133) Do you believe that one of the MRV options proposed is more likely to lead to perverse incentives (e.g. more waste diverted to landfill) or to unintended consequences as a result of applying the UK ETS to waste incineration and EfW? Please consider different scenarios and provide evidence to support your views where possible.

Option B is more likely to lead to unintended consequences, with more scope for misreporting of the fossil carbon percentages of waste. However, if all carbon sources (fossil and biogenic) were to be treated the same within waste incinerators and EfW, this would reduce the opportunity for manipulation.

Residual waste changes from city to city and season to season, therefore agreeing an average waste composition that is representative across all waste incinerators and EfWs is not a practical solution.

134) Do you believe any additional greenhouse gases, other than CO2, that are emitted by EfW plants or incinerators, should be covered by the UK ETS? (Y/N) If so, please provide details on which gases and how it could work in practice.

EfW plants do not emit other greenhouse gases in significant quantities, so if the UK ETS only covers EfW and waste incinerators there is no need for it to cover gases other than CO_2.

However, our preference is for the UK ETS to apply more widely to the waste sector to avoid market distortions and unintended consequences. In the context of landfill, gasification and anaerobic digestion, methane – including biogenic methane – can be a major contributor to climate harm. Methane should also be included if the waste sector as a whole is to be kept on a level playing field with regard to greenhouse gas emissions.

135) How would the application of an ETS to waste incineration and EfW impact stakeholders (including operators of waste incinerators, operators of EfW plants, LAs, consumers, customers)?

In the short term, if the ETS is extended only to waste incineration and EfW, it would increase costs and lead to waste being diverted from EfW plant to other, cheaper, alternatives such as landfill, gasification, export, or illegal dumping.

In the longer term, when CCS is available, and with the whole waste sector considered, we would expect it to drive emissions reductions and incentivise recycling and the use of waste for useable energy.

136) Could the introduction of a carbon price incentivise waste operators and/or LAs to improve their operations or processes to reduce fossil waste being incinerated? (Y/N) Please outline your reasoning in as much detail as possible and provide evidence to support your views.

It is not clear that this is an entirely desirable outcome. Many plastics are very energy intensive to recycle, and recycling could increase emissions compared to using them for EfW. This will become increasingly true as more fossil-based plastics are replaced with bio-based alternatives. Reduction in fossil waste being incinerated is only of benefit if the alternative waste treatment solution has a lower carbon footprint.

138) Is there opportunity (in the medium-long term) for the carbon price to incentivise waste operators and/or LAs to invest in carbon capture and storage infrastructure, to reduce fossil carbon emissions? (Y/N) Please outline your reasoning in as much detail as possible and provide evidence to support your views.

Yes, when the availability of CCS transport and storage infrastructure has increased and the technology is better proven. It will also be important to include an equivalent incentive for negative emissions.

However, if EfW is brought into the UK ETS ahead of other waste management processes, the resulting market distortions may divert investment from EfW so that it is not ready to take advantage of favourable CCS conditions when they arise. In this scenario the carbon price will not drive CCS for EfW, as it would have previously driven the sector away from EfW.

139) In the event of the carbon price being applied to waste operators, will waste operators be able to pass through their costs to customers (including LAs)? (Y/N) Please explain in as much detail as possible why, how, and to what extent this may or may not occur.

Currently, waste operators are able to pass all their costs on to customers. In the event of the carbon price being applied to waste operators we would expect to see the increased costs incurred similarly passed through.

141) Do you believe that government should consider phasing in ETS obligations to the sector over time? (Y/N) If yes, please outline why, how, and to what extent phasing options could be provided.

Yes, but this should be part of a holistic approach to the whole waste and biomass sectors, to avoid perverse incentives and unintended consequences, such as the diversion of fossil wastes to landfill or waste biomass to biomass incineration without CCS.

A clear approach with milestones will reduce uncertainty and enable investment. Where the sector can see phased in ETS obligations with parallel increases in the landfill tax and investment in preventing illegal disposal, emissions minimising behaviour can be driven.

142) Would operators of incineration/EfW plants be exposed to competitiveness impacts abroad and carbon leakage risk, in the event of being exposed to the carbon price? (Y/N) Please explain in as much detail as possible and provide evidence to support your views.

It would certainly expose them to the risk of carbon leakage, to other sectors in the UK as well as overseas. Diverting biomass from ATT, with the potential for permanent carbon removal, to gasification without CCS could increase emissions. Diverting fossil wastes to landfill, export, or illegal dumping would lead to increased litter and pollution, and potentially to increased emissions as fossil fuels are used in place of fossil wastes to generate energy.

With regard to carbon leakage to the EU, the risk could be reduced by coordinating the timing of the introduction of EfW and incinerators to the UK ETS and EU ETS schemes – or at least ensuring that the UK scheme does not run too far ahead.

143) Have you identified any other distributional impacts (including wider environmental or social impacts) arising from this proposal? (Y/N) Do you have views on how government could address these concerns?

Yes. A piecemeal approach to regulating the waste sector can lead to displaced waste streams and environmental pollution at home and abroad, as well as increased emissions.

144) What additional policies would be needed to support the UK ETS in decarbonising waste incineration and EfW? How would this change over time?

Additional policies needed include: increasing the landfill tax, introducing parallel policies for biomass and biowastes, and increased investment in prevention and prosecution of illegal dumping

146) Are there other parts of the waste management system that should be included in the scope of the UK ETS? For example, landfill or wastewater. (Y/N) Please explain in as much detail as possible and provide evidence to support your views.

Our preference is for the UK ETS to apply more widely to the waste sector to avoid market distortions. The waste sector needs to be considered and treated holistically to avoid displaced waste streams and increased environmental pollution and emissions.

Greenhouse Gas Removals (GGRs)

147) Do you believe the UK ETS could be an appropriate long-term market for GGRs? (Y/N) Please explain why, highlighting benefits and risks where possible.

Yes. GGRs could be used to generate new certificates for the UK ETS, improving liquidity whilst continuing to drive emissions reductions. A single market for both emissions and emissions reductions will enable the UK economy to find the most efficient path to net zero.

Quality assurance will be fundamental to GGRs playing a positive role in the UK ETS, as will the existence of other regulatory measures, such as product standards, to ensure that GGRs are used to offset difficult to treat sectors, rather than avoiding delivery of achievable carbon reduction technology and fuel switching. It will be important that wider considerations, such as opportunity costs (e.g., of afforestation instead of agriculture), are taken into account.

148) How could the design of the UK ETS be adapted to include GGRs while still maintaining the incentive to decarbonise for ETS participants?

The UK ETS should continue to require participants to pay for carbon emitted whilst paying out for carbon removed. If carbon sinks are finite, there is a risk that they are over-utilised early in place of achievable abatement – a mismatch between immediate payment and the need for long term storage – which may imply a need for public institute management of key carbon sinks.

149) To what extent could the UK ETS price signal incentivise development of the full range of GGRs, including engineered and nature-based GGRs, given the expected differences in the project costs?

If government relies on a single price signal than the market will not drive the development of more expensive GGR solutions until the cheaper options are nearing exhaustion. One option to counter this might be to offer different top up payments to different GGR solutions in addition to UK ETS allowances. This would remunerate all GGR with the same UK ETS price, while de-risking more expensive technology with the certainty of an additional £/t payment on top of it. A similar approach was applied to Feed-in Premiums for renewables in some European countries.

Another option might be to impose quota or limits on certain solutions, such as afforestation, perhaps under the management of an institution tasked with long-term assessment of potential GGR needs.

151) What impacts or opportunities could arise for the emerging markets for wider ecosystem services (e.g. biodiversity, flood management, water quality) if GGRs were included in a compliance market like the UK ETS?

These emerging markets could be strengthened if the GGR impacts of ecosystem services were explicitly rewarded through the UK ETS.

152) Are there any impacts, constraints or unintended consequences that need to be managed if incorporating GGRs within an ETS?

Incorporating GGRs into the ETS must not happen at the expense of achievable but currently expensive emissions reductions, such as CCUS or fuel switching. It must also not happen at the expense of wider considerations, such as continuing to have adequate land available for agriculture or other use.

153) Do you think there are other eligibility requirements we should consider [in addition to robust MRV, permanent removal, and clear property rights for any GGR credits or allowances in the market] and what are these?

Other eligibility criteria might include constraints on the amount of nature-based GGRs offered within a set period, and/or per GGR operator, and/or to any single emitter. Requiring permanent removal may not be the best way forward: non-permanent removals may have an important role to play in mitigating the impact of short-lived climate forcers such as methane. There will be other ways to ensure that non-

permanent removals play the right role in the system, such as only making them available to certain types of emitter and weighting them to be less valuable than permanent removals.

155) For GGRs that have a risk of carbon being re-released into the atmosphere, are there any potential solutions we should consider enabling market participation?

Industry standards and a strict certification and MRV process must be developed to ensure risks are being properly assessed and managed on an ongoing basis.

Operators of finite long term storage solutions should also be asked to contribute to an industry fund to defray the costs of a management plan for the store once it is full, which is likely to be required for a very long time.

156) What are challenges of integrating non-permanent removals alongside permanent removals in the UK ETS and how can these be overcome?

As above.

159) Should GGRs be incorporated into the UK ETS or would it be preferable to establish a separate, but linked, market for GGRs?

They should be incorporated into the UK ETS, in the longer term at least. In the immediate term they should either be incorporated into the ETS or government should establish a separate system that has a clear timeline for integration into the ETS: the latter might help avoid any teething issues negatively affecting the ETS.

Operational amendments

Operational amendments: electricity generators

174) Should electricity generators who have not exported measurable heat produced by means of high-efficiency cogeneration in the “relevant period”, but start to do so in following scheme years, be eligible for free allocation once they can demonstrate that they meet the eligibility criteria? (Y/N) Please explain your answer.

175) Over which period should the determination of whether the measurable heat is produced by means of high-efficiency cogeneration be assessed?

176) Do you agree that in the case of new entrants that are classified as electricity generators and who wish to apply for a free allocation of allowances on the basis that the produce measurable heat by means of high-efficiency co-generation, they may not apply for a free allocation until the operator can provide a full calendar year of activity level data? (Y/N) Please explain your answer.

Operational amendments: flexible share

177) Do you agree that the Authority should have the ability to create the total number of allowances from the flexible share in a scheme year in addition to the annual cap? (Y/N) Please explain your answer.

Yes. This will provide more flexibility to the Authority to smooth supply between years if required to reduce price volatility.

Operational amendments: penalties

191) Do you agree with the recommendation that, instead of the deficit being added onto the next year's surrender obligation, the regulators should be empowered to issue a deficit notice to require operators/aircraft operators who fail to surrender allowances to cover any deficit? (Y/N) Please explain your answer.

Yes.

192) Do you agree that the deficit penalty should be applied in two parts, the first being a mandatory penalty when an operator or aircraft operator fails to make up a deficit by the date specified in a deficit notice, and the second a discretionary daily penalty that applies if the operator/aircraft operator has not made up the deficit within a month of the deficit notice deadline? (Y/N) Please explain your answer.

Yes

193) Do you agree with the suggested penalty amounts, with the mandatory penalty calculated as the number of outstanding allowances multiplied by 1.5x the relevant carbon price and the additional daily penalty set at £1,000 a day until the operator/aircraft operator surrenders the deficit? (Y/N) Please explain your answer.

While we agree with the approach of applying a multiplication factor, as opposed to the current £100/tonne penalty, we have concerns over application of the daily penalty. There needs to be a mechanism to enable the daily penalty to be suspended if there are ongoing discussions between the regulator and the operator regarding the reasons for the under-report. It would be unfair to impose a daily penalty if evidence was being assembled by the operator or reviewed by Regulator. If following the review of the evidence the deficit notice was issued correctly then the daily penalty could be amended to include the period when discussions were taking place.